Mr. Ira Smith
Hydraulic Press Brick Company
Centerton Road
Brooklyn, Indiana, 46111

Re: 109-11189
Second Administrative Amendment to
Part 70 109-6835-00007

Dear Mr. Smith:

Hydraulic Press Brick Company was issued Part 70 operating permit T109-6835-00007 on February 2, 1999 for a shale processing plant producing lightweight expanded shale aggregate. An application for a significant source modification (SSM109-11087-00007) was received on June 25, 1999. A letter requesting that the significant source modification SSM109-11087-00007 be incorporated into their Part 70 permit was received on June 25, 1999. Pursuant to the provisions of 326 IAC 2-7-11(a)(5) the permit is hereby administratively amended to incorporate the significant source modification SSM109-11087-00007 into the Part 70 Operating Permit as follows (with new language bolded and old language stricken):

(a) Condition A.2, Page 5 of 46
Add to the listing of emission units the following:

(b) ~~Two (2)~~ **One (1)** rotary kiln~~s~~, identified as K3 ~~and K4~~, ~~each~~ with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, ~~each~~ with a maximum capacity of 20 tons of raw shale per hour, ~~each~~ using a Peabody wet scrubber as control, and ~~each~~ exhausting to stack ST4.

(c) one (1) rotary kiln, identified as K4, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning No. 4 fuel oil, natural gas or bituminous coal, with a maximum capacity of 20 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4.

(b) Section D.2, Pages 32, 33, 34, 35, 36 and 36a, has been modified as follows:.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) ~~Two (2)~~ **One (1)** rotary kiln~~s~~, identified as K3 ~~and K4~~, ~~each~~ with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, ~~each~~ with a maximum capacity of 20 tons of raw shale per hour, ~~each~~ using a Peabody wet scrubber as control, and ~~each~~ exhausting to stack ST4.

(b) one (1) rotary kiln, identified as K4, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning No. 4 fuel oil, natural gas or bituminous coal, with a maximum capacity of 20 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4.

(c) One (1) rotary kiln, identified as K5, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 40 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The use of No. 4 fuel oil in rotary kiln K4 shall be limited to less than 0.99 million gallons per twelve (12) month consecutive period. For SO_2 and NOx, the net emission increase from any modification must be limited to less than 40 tons per twelve (12) month consecutive period. Therefore, the allowable SO_2 and NOx emissions from the modification shall not exceed 39 tons per twelve (12) month consecutive period for SO_2 emissions and 39 tons per twelve (12) month consecutive period for NOx emissions.

(b) For PM10, the net emission increase from any modification must be limited to less than 3.42 pounds per hour. Therefore, the allowable PM-10 emissions from the modification shall not exceed 15 tons per year for PM-10 emissions.

Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.2.~~1~~**2** Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1]

(a) Pursuant to 326 IAC 7-1.1-1 (Sulfur Dioxide Emissions Limitations), the SO_2 emissions from each of the ~~three (3)~~**two (2)** rotary kilns (IDs K3~~, K4~~ and K5) when burning coal, shall not exceed six (6) pounds per MMBtu of coal combustion.

Pursuant to Operation Permit 55-02-90-0094, ~~55-02-90-0095,~~ and 55-02-90-0096, the sulfur content of the coal delivered to the ~~three (3)~~**two (2)** rotary kilns (IDs K3~~, K4~~ and K5) when burning coal, shall not exceed 2.40% by weight.

(b) The sulfur dioxide emissions from the one (1) rotary kiln (ID K4) when burning No. 4 fuel oil shall be limited to 1.6 pounds per MMBtu of heat input from No. 4 fuel oil.

D.2.~~2~~**3** Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from each of the:

(a) two (2) rotary kilns (IDs K3 and K4) shall not exceed 30.51 pounds per hour each when operating at a process weight rate of 40,000 pounds per hour (equivalent to 20 tons per hour). When both of the two (2) rotary kilns (IDs K3 and K4) are operating the allowable PM emission rate from stack ST4 shall not exceed the sum of the individual limits for each kiln (equivalent to 61.02 pounds per hour).

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

(b) one (1) rotary kiln (ID K5) shall not exceed 42.53 pounds per hour when operating at a process weight rate of 80,000 pounds per hour (equivalent to 40 tons per hour).

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0P^{0.11}-40$ where E = rate of emission in pounds per hour, and P = process weight rate in tons per hour

D.2.~~3~~**4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements

D.2.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on the one (1) Kiln (ID K5) and ~~both of the two (2)~~ **the one (1)** Kiln~~s~~ (ID K3 ~~and K4~~) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.2.~~5~~**6** Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu when burning coal **and one and six tenths (1.6) pounds per MMBtu when burning No. 4 fuel oil**. Compliance shall be determined utilizing one of the following options:

(a) Coal sampling and analysis shall be performed using one of the following procedures:

(1) Minimum Coal Sampling Requirements and Analysis Methods [326 IAC 3-7-2(b)(3)]:

(A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;

(B) Coal shall be sampled at least three (3) times per day and at least one (1) time per eight (8) hour period unless no coal is bunkered during the preceding eight (8) hour period;

(C) Minimum sample size shall be five hundred (500) grams;

(D) Samples shall be composited and analyzed at the end of each calendar month;

(E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or

(b) Sample and analyze the coal pursuant to 326 IAC 3-7-2(a);

(c) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or

(b) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5-1 may be used as the means for determining compliance with the emission limitations in 326 IAC 7-2. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(e)]

(c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the three (3) rotary kilns (IDs K3, K4 and K5), using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

D.2.~~6~~**7** Particulate Matter (PM)

(a) The wet scrubber for PM control shall be in operation at all times when the two (2) rotary kilns (IDs K3 and K4) are in operation.

(b) The baghouse for PM control shall be in operation at all times when the one (1) rotary kiln (ID K5) is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.~~7~~**8** Parametric Monitoring

(a) The Permittee shall record the total static pressure drop across the wet scrubber used in conjunction with the two (2) rotary kilns (IDs K3 and K4), at least once daily when the two (2) rotary kilns (IDs K3 and K4) are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained above 8.0 inches of water or a range established during the latest stack test. The Compliance

Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

(b) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the one (1) rotary kiln (ID K5), at least once daily when the one (1) rotary kiln (ID K5) is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 and 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.2.~~8~~**9** Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the one (1) rotary kiln (ID K5) operation when venting to the atmosphere. All defective bags shall be replaced.

D.2.~~9~~**10** Broken or Failed Bag **or Scrubber** Detection

In the event that bag **or scrubber** failure has been observed.

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.2.~~10~~**11** Visible Emissions Notations

(a) Daily visible emission notations of the two (2) rotary kilns (IDs K3 and K4) wet scrubber stack (S/V ID ST4) and the one (1) rotary kiln (ID K5) baghouse stack (S/V ID ST 5) emissions shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.~~11~~**12** Record Keeping Requirements

(a) To document compliance with Condition D.2.~~1~~**3**, the Permittee shall maintain records in accordance with (1) through (4) below when burning coal. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the PM and SO_2 emission limits established in D.2.~~1~~ **3** and D.2.~~2~~ **4**.

(1) Calendar dates covered in the compliance determination period;

(2) Actual coal usage since last compliance determination period;

(3) Sulfur content, heat content, and ash content; and

(4) Sulfur dioxide emission rates.

(b) To document compliance with Condition D.2.1 and D.2.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO_2 and NO_X usage limits and/or the SO_2 and NO_X emission limits established in Condition D.2.1, as pertains to rotary kiln K4.

(1) Calendar dates covered in the compliance determination period;

(2) Actual No. 4 fuel oil usage since last compliance determination period;

(3) Sulfur content, heat content, and ash content; and

(4) Sulfur dioxide emission rates.

~~(b)~~**(c)** Pursuant to 326 IAC 3-7-5(a), owners or operators of sources with total coal-fired capacity greater than or equal to one hundred (100) MMBtu per hour actual heat input shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAM.

~~(c)~~**(d)** To document compliance with Condition D.2.~~7~~ **9**, the Permittee shall maintain the following as pertains to the baghouse and the wet scrubber:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: frequency and differential pressure.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(d) To document compliance with Condition D.2.~~8~~**10**, the Permittee shall maintain the following as pertains to the baghouse:

(1) To document compliance with Condition D.2.~~8~~**10**, the Permittee shall maintain records of the results of the inspections required under Condition D.2.~~8~~**10** and the dates the vents are redirected.

(e) To document compliance with Condition D.2.~~10~~**12** the Permittee shall maintain the following as pertains to the baghouse:

(1) To document compliance with Condition D.2.~~10~~**12**, the Permittee shall maintain records of daily visible emission notations of the three (3) rotary kilns (IDs K3, K4 and K5) stack exhaust.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.13 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

(c) A Quarterly Report, Page 46, has been added to the permit.

The table of contents, description of equipment and reporting forms will also be updated to include the above referenced information. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this amendment and the following revised permit pages to the front of the original permit.

Operation of the new equipment incorporated into the Part 70 operating permit by this amendment may commence operation upon issuance of this approval. This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter please contact Phillip Ritz, at 973-575-2555 (ext. 3241) or 1-800-451-6027 press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
PR
cc: File - Morgan County
U.S. EPA, Region V
Morgan County Health Department
Air Compliance Section Inspector Marc Goldman
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Nancy Landau

PART 70 OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

Hydraulic Press Brick Company
Centerton Road
Brooklyn, Indiana 46111

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T109-6835-00007	
Issued by: Felicia R. George, Assistant Commissioner Office of Air Management	Issuance Date: February 2, 1999

First Administrative Amendment: 109-10905	Pages Affected: 4, 5, 6, 6a, 42a, 42b, 42c, 42d
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Second Administrative Amendment: 109-11189	Pages Affected: 4, 4a, 5, 6, 32, 33, 34, 35, 36, 36a, 36b and 46
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary shale processing plant producing lightweight expanded shale aggregate.

Responsible Official:	Ira Smith
Source Address:	Centerton Road, Brooklyn, Indiana 46111
Mailing Address:	P.O. Box 7, Brooklyn, Indiana 46111-0007
SIC Code:	3295
County Location:	Morgan
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) pre-kiln shale processing operation, identified as pre-kiln, with a maximum capacity of 200 tons of raw shale per hour, using wet suppression of fugitive dust as control, and exhausting fugitively, and consisting of the following equipment:
  (1) one (1) primary crusher, identified as PK1, with a maximum capacity of 200 tons of raw shale per hour,
  (2) one (1) secondary crusher, identified as PK2, with a maximum capacity of 100 tons of raw shale per hour,
  (3) six (6) conveyors, identified as PK3 through PK8, each with a maximum capacity of 200 tons of raw shale per hour,

(b) One (1) rotary kiln, identified as K3, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 20 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4.

(c) one (1) rotary kiln, identified as K4, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning No. 4 fuel oil, natural gas or bituminous coal, with a maximum capacity of 20 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4.

(d) One (1) rotary kiln, identified as K5, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 40 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5,

(e) One (1) haydite crusher line, identified as HCR, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, exhausting fugitively, and consisting of the following equipment:

(1) one (1) primary haydite crusher, identified as HCR1, with a maximum capacity of 100 tons of expanded shale per hour,
(2) one (1) secondary haydite crusher, identified as HCR2, with a maximum capacity of 100 tons of expanded shale per hour,
(3) three (3) screens, identified as HCR3 through HCR5, each with a maximum capacity of 100 tons of expanded shale per hour, and
(4) seven (7) conveyors, identified as HCR9 through HCR15, each with a maximum capacity of 100 tons of expanded shale per hour, and

(f) One (1) reciprocating grate clinker cooler, identified as CLNKCOOL, with a maximum capacity of 40 tons of expanded shale per hour, using a multiclone as control, and exhausting to stack ST2.

(g) One (1) expanded shale aggregate crusher line, identified as ESA, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:
(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,
(2) one (1) screen, identified as ESA 2, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and
(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Paved and unpaved roads and parking lots with public access,
(b) Other activities or categories not previously identified with emissions below insignificant thresholds:
(1) Two coal silos, identified as silos 1 and 2, with a conveying system.
(2) Four (4) covered silos, identified as silos 3, 4, 5A, and 5B, each with a maximum capacity of 200 tons of raw shale,
(3) Three (3) hoppers, identified as HCR6 through HCR8, each with a maximum capacity of 100 tons of raw shale per hour,
(4) Two (2) chutes, identified as HCR16 and HCR17, each with a maximum capacity of 100 tons of expanded shale per hour.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
(a) One (1) rotary kiln, identified as K3, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 20 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4.
(b) one (1) rotary kiln, identified as K4, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning No. 4 fuel oil, natural gas or bituminous coal, with a maximum capacity of 20 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4.
(c) One (1) rotary kiln, identified as K5, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 40 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The use of No. 4 fuel oil in rotary kiln K4 shall be limited to less than 0.99 million gallons per twelve (12) month consecutive period. For SO_2 and NOx, the net emission increase from any modification must be limited to less than 40 tons per twelve (12) month consecutive period. Therefore, the allowable SO_2 and NOx emissions from the modification shall not exceed 39 tons per twelve (12) month consecutive period for SO_2 emissions and 39 tons per twelve (12) month consecutive period for NOx emissions.

(b) For PM10, the net emission increase from any modification must be limited to less than 3.42 pounds per hour. Therefore, the allowable PM-10 emissions from the modification shall not exceed 15 tons per year for PM-10 emissions.

Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.2.2 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

(a) Pursuant to 326 IAC 7-1.1-1 (Sulfur Dioxide Emissions Limitations), the SO_2 emissions from each of the two (2) rotary kilns (IDs K3, and K5) when burning coal, shall not exceed six (6) pounds per MMBtu of coal combustion. The sulfur dioxide emissions from the one (1) rotary kiln (ID K4) when burning No. 4 fuel oil shall be limited to 1.6 pounds per MMBtu of heat input from No. 4 fuel oil.

Pursuant to Operation Permit 55-02-90-0094 and 55-02-90-0096, the sulfur content of the coal delivered to the two (2) rotary kilns (IDs K3, and K5) when burning coal, shall not exceed 2.40% by weight.

(b) The sulfur dioxide emissions from the one (1) rotary kiln (ID K4) when burning No. 4 fuel oil shall be limited to 1.6 pounds per MMBtu of heat input from No. 4 fuel oil.

D.2.3 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from each of the:

(a) two (2) rotary kilns (IDs K3 and K4) shall not exceed 30.51 pounds per hour each when operating at a process weight rate of 40,000 pounds per hour (equivalent to 20 tons per hour). When both of the two (2) rotary kilns (IDs K3 and K4) are operating the allowable PM emission rate from stack ST4 shall not exceed the sum of the individual limits for each kiln (equivalent to 61.02 pounds per hour).

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

(b) one (1) rotary kiln (ID K5) shall not exceed 42.53 pounds per hour when operating at a process weight rate of 80,000 pounds per hour (equivalent to 40 tons per hour).

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0P^{0.11}-40$ where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on the one (1) Kiln (ID K5) and the one (1) Kiln (ID K3) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.2.6 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu when burning coal and one and six tenths (1.6) pounds per MMBtu when burning No. 4 fuel oil. Compliance shall be determined utilizing one of the following options:

(a) Coal sampling and analysis shall be performed using one of the following procedures:

(1) Minimum Coal Sampling Requirements and Analysis Methods [326 IAC 3-7-2(b)(3)]:

(A) The coal sample acquisition point shall be at a location where

representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;

(B) Coal shall be sampled at least three (3) times per day and at least one (1) time per eight (8) hour period unless no coal is bunkered during the preceding eight (8) hour period;

(C) Minimum sample size shall be five hundred (500) grams;

(D) Samples shall be composited and analyzed at the end of each calendar month;

(E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or

(2) Sample and analyze the coal pursuant to 326 IAC 3-7-2(a);

(3) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or

(b) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5-1 may be used as the means for determining compliance with the emission limitations in 326 IAC 7-2. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(e)]

(c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the three (3) rotary kilns (IDs K3, K4 and K5), using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

D.2.7 Particulate Matter (PM)

(a) The wet scrubber for PM control shall be in operation at all times when the two (2) rotary kilns (IDs K3 and K4) are in operation.

(b) The baghouse for PM control shall be in operation at all times when the one (1) rotary kiln (ID K5) is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.8 Parametric Monitoring

(a) The Permittee shall record the total static pressure drop across the wet scrubber used in conjunction with the two (2) rotary kilns (IDs K3 and K4), at least once daily when the two (2) rotary kilns (IDs K3 and K4) are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained above 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

(b) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the one (1) rotary kiln (ID K5), at least once daily when the one (1) rotary kiln (ID K5) is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 and 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.2.9 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the one (1) rotary kiln (ID K5) operation when venting to the atmosphere. All defective bags shall be replaced.

D.2.10 Broken or Failed Bag or Scrubber Detection

In the event that bag or scrubber failure has been observed.

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.2.11 Visible Emissions Notations

(a) Daily visible emission notations of the two (2) rotary kilns (IDs K3 and K4) wet scrubber stack (S/V ID ST4) and the one (1) rotary kiln (ID K5) baghouse stack (S/V ID ST 5) emissions shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not

counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.12 Record Keeping Requirements

(a) To document compliance with Condition D.2.3, the Permittee shall maintain records in accordance with (1) through (4) below when burning coal. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the PM and SO_2 emission limits established in D.2.3 and D.2.4.

(1) Calendar dates covered in the compliance determination period;

(2) Actual coal usage since last compliance determination period;

(3) Sulfur content, heat content, and ash content; and

(4) Sulfur dioxide emission rates.

(a) To document compliance with Condition D.2.1 and D.2.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO_2 and NO_X usage limits and/or the SO_2 and NO_X emission limits established in Condition D.1.1, as pertains to rotary kiln K4.

(1) Calendar dates covered in the compliance determination period;

(2) Actual No. 4 fuel oil usage since last compliance determination period;

(3) Sulfur content, heat content, and ash content; and

(4) Sulfur dioxide emission rates.

(b) Pursuant to 326 IAC 3-7-5(a), owners or operators of sources with total coal-fired capacity greater than or equal to one hundred (100) MMBtu per hour actual heat input shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAM.

(c) To document compliance with Condition D.2.9, the Permittee shall maintain the following as pertains to the baghouse and the wet scrubber:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: frequency and differential pressure.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(d) To document compliance with Condition D.2.10, the Permittee shall maintain the following as pertains to the baghouse:

(1) To document compliance with Condition D.2.10, the Permittee shall maintain records of the results of the inspections required under Condition D.2.8 and the dates the vents are redirected.

(e) To document compliance with Condition D.2.12 the Permittee shall maintain the following as pertains to the baghouse:

(1) To document compliance with Condition D.2.12, the Permittee shall maintain records of daily visible emission notations of the three (3) rotary kilns (IDs K3, K4 and K5) stack exhaust.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.13 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Hydraulic Press Brick Company
Source Address: Centerton Road
Mailing Address: Brooklyn, Indiana, 46111
Part 70 Permit No.: T109-6835-00007
Facility: Rotary kiln K4
Parameter: SO_2 and NOx
Limit: The use of No. 4 fuel oil in rotary kiln K4 shall be limited to less than 0.99 million gallons per twelve (12) month consecutive period and the sulfur content of the No. 4 fuel oil delivered to rotary kiln K4 when burning No. 4 fuel oil, shall not exceed 0.5% by weight.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	No. 4 Fuel Oil Usage This Month	No. 4 Fuel Oil Usage Previous 11 Months	No. 4 Fuel Oil Usage 12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____